

In the Claims:

1. (Currently Amended) A method of fabricating microstructuresan array of microlenses comprising:

impingingscanning a radiation beam at varying amplitude through a substrate that is transparent thereto into a radiation sensitivenegative photoresist layer on the substrate to image the microstructuresarray of microlenses in the radiation sensitivenegative photoresist layer.

2. (Canceled)

3. (Currently Amended) A method according to Claim [[2]]1 wherein the negative photoresist layer is thicker than the microstructuresarray of microlenses and wherein impingingscanning comprises impingingscanning a radiation beam at varying amplitude through a substrate that is transparent thereto into a negative photoresist layer on the substrate to image a buried microstructuresarray of microlenses in the negative photoresist layer, adjacent the substrate.

4. (Currently Amended) A method according to Claim [[2]]1 wherein at least some of the microstructuresmicrolenses include a base and a top that is narrower than the base and wherein impingingscanning comprises impingingscanning a radiation beam at varying amplitude through a substrate that is transparent thereto into a negative photoresist layer on the substrate to image microstructuresthe array of microlenses in the negative photoresist layer with the bases adjacent the substrate and the tops remote from the substrate.

5. (Currently Amended) A method according to Claim [[2]]1 wherein the negative photoresist layer is of variable thickness thereacross, wherein a minimum thickness of the negative photoresist layer is thicker than the microstructuresmicrolenses and wherein impingingscanning comprises impingingscanning a radiation beam at varying amplitude through a substrate that is transparent thereto into a negative photoresist layer on the substrate to image buried

microstructuresmicrolenses beneath the negative photoresist layer, adjacent the substrate, that are independent of the variable thickness of the negative photoresist layer.

6. (Currently Amended) A method according to Claim [[2]]1 wherein the negative photoresist layer includes impurities thereon, remote from the substrate, wherein the negative photoresist layer is thicker than the microstructuresmicrolenses and wherein impingingscanning comprises impingingscanning a radiation beam at varying amplitude through a substrate that is transparent thereto into a negative photoresist layer on the substrate to image buried microstructuresmicrolenses in the negative photoresist layer, adjacent the substrate, that are not distorted by the impurities.

7. (Original) A method according to Claim 1 wherein the substrate is a flexible substrate.

8. (Currently Amended) A method according to Claim 1 wherein the radiation sensitivenegative photoresist layer is on a cylindrical platform such that the substrate is on the radiation sensitivenegative photoresist layer remote from the cylindrical platform, and wherein impingingscanning comprises:

rotating the cylindrical platform about an axis thereof while simultaneously axially rastering the radiation beam at varying amplitude through the substrate that is on the cylindrical platform across at least a portion of the radiation sensitivenegative photoresist layer to image the microstructuresarray of microlenses in the radiation sensitivenegative photoresist layer.

9. (Original) A method according to Claim 8 further comprising simultaneously translating the cylindrical platform and/or radiation beam axially relative to one another.

10. (Currently Amended) A method according to Claim 9 further comprising simultaneously continuously varying the amplitude of the radiation beam.

11. (Original) A method according to Claim 1 wherein the substrate is at least about one square foot in area.

12. (Currently Amended) A method according to Claim 1 wherein impingingscanning is performed continuously on the substrate for at least about 1 hour.

13. (Currently Amended) A method according to Claim 1 wherein impingingscanning is performed continuously on the substrate for at least about 1 hour to fabricate at least about one million microstructures microlenses.

14. (Canceled)

15. (Currently Amended) A method according to Claim 1 further comprising:

developing the microstructures that are imaged in the radiation sensitivenegative photoresist layer to provide a microstructuremicrolens array master.

16. (Original) A method according to Claim 1 wherein the substrate is cylindrical, ellipsoidal or polygonal in shape.

17. (Currently Amended) A method according to Claim 1 further comprising translating the substrate and/or radiation beam relative to one another while impingingscanning the radiation beam.

18. (Currently Amended) A method according to Claim 15 further comprising:

forming a plurality of second generation stampers directly from the master;
and

forming a plurality of third generation ~~microstructure~~microlens array end
products directly from a stamper.

19.-20. (Canceled)

21. (Currently Amended) A method of fabricating ~~microstructures~~an array
of ~~microlenses~~ comprising:

~~impingingscanning~~ a radiation beam at varying amplitude into a negative
photoresist layer to image the ~~microstructures~~array of ~~microlenses~~ in the negative
photoresist layer, such that portions of the negative photoresist layer that are exposed
to the radiation beam remain after development.

22. (Currently Amended) A method according to Claim 21 wherein the
negative photoresist layer is thicker than the ~~microstructures~~array of ~~microlenses~~ and
wherein ~~impingingscanning~~ comprises impinging scanning a radiation beam at
varying amplitude into a negative photoresist layer to image a buried
~~microstructures~~array of ~~microlenses~~ in the negative photoresist layer.

23. (Currently Amended) A method according to Claim 21 wherein the
negative photoresist layer is of variable thickness thereacross, wherein a minimum
thickness of the negative photoresist layer is thicker than the
~~microstructures~~microlenses and wherein ~~impingingscanning~~ comprises
impingingscanning a radiation beam at varying amplitude into the negative
photoresist layer to image buried ~~microstructures~~microlenses beneath the negative
photoresist layer that are independent of the variable thickness of the negative
photoresist layer.

24. (Currently Amended) A method according to Claim 21 wherein the
negative photoresist layer includes impurities thereon, wherein the negative

photoresist layer is thicker than the microstructuresmicrolenses and wherein impingescanning comprises impingescanning a radiation beam at varying amplitude into the negative photoresist layer on the substrate to image buried microstructuresmicrolenses in the negative photoresist layer that are not distorted by the impurities.

25. (Currently Amended) A method according to Claim 21 wherein the negative photoresist layer is on a cylindrical platform and wherein impingescanning comprises:

rotating the cylindrical platform about an axis thereof while simultaneously axially rastering the radiation beam at varying amplitude across at least a portion of the negative photoresist layer that is on the cylindrical platform to image the microstructuresarray of microlenses in the negative photoresist layer.

26. (Original) A method according to Claim 25 further comprising simultaneously translating the cylindrical platform and/or radiation beam axially relative to one another.

27. (Currently Amended) A method according to Claim 26 further comprising simultaneously continuously varying the amplitude of the radiation beam.

28. (Original) A method according to Claim 21 wherein the negative photoresist layer is at least about one square foot in area.

29. (Currently Amended) A method according to Claim 21 wherein impingescanning is performed continuously on the negative photoresist layer for at least about 1 hour.

30. (Currently Amended) A method according to Claim 21 wherein impingescanning is performed continuously on the negative photoresist layer for at least about 1 hour to fabricate at least about one million microstructures microlenses.

31. (Canceled)

32. (Original) A method according to Claim 21 wherein the negative photoresist layer is cylindrical, ellipsoidal or polygonal in shape.

33. (Currently Amended) A method according to Claim 21 further comprising translating the substrate and/or radiation beam relative to one another, while impingingscanning the radiation beam.

34. (Currently Amended) A method according to Claim [[31]]21 further comprising:

developing the microstructuresmicrolenses that are imaged in the negative photoresist layer to provide a microstructuremicrolens array master.

35. (Currently Amended) A method according to Claim 34 further comprising:

forming a plurality of second generation stampers directly from the master; and

forming a plurality of third generation microstructuremicrolens array end products directly from a stamper.

36.-37. (Canceled)

38. (Currently Amended) A method of fabricating microstructuresarray of microlenses comprising:

impingingscanning a laser beam at varying amplitude through a substrate that is transparent thereto into a negative photoresist layer on the substrate to image the microstructuresarray of microlenses in the negative photoresist layer, wherein at least some of the microstructuresmicrolenses include a base adjacent the substrate and a top that is narrower than the base, remote from the substrate.

39. (Original) A method according to Claim 38 wherein the substrate is a flexible substrate.

40. (Currently Amended) A method according to Claim 38 wherein the negative photoresist layer is on a cylindrical platform such that the substrate is on the negative photoresist layer remote from the cylindrical platform, and wherein impingingscanning comprises:

rotating the cylindrical platform about an axis thereof while simultaneously axially rastering the laser beam at variable amplitude through the substrate across at least a portion of the negative photoresist layer that is on the cylindrical platform to image the microstructuresarray of microlenses in the negative photoresist layer.

41. (Original) A method according to Claim 40 further comprising simultaneously translating the cylindrical platform and/or laser beam axially relative to one another.

42. (Currently Amended) A method according to Claim 41 further comprising simultaneously continuously varying the amplitude of the laser beam.

43. (Canceled)

44. (Currently Amended) A method according to Claim 38 further comprising:

developing the microstructuresmicrolenses that are imaged in the photoresist layer to provide a microstructuremicrolens array master.

45. (Currently Amended) A method according to Claim 44 further comprising:

forming a plurality of second generation stampers directly from the master; and

forming a plurality of third generation ~~microstructure~~microlens array end products directly from a stamper.

46.-[[107.]]105. (Canceled)